REMARKS

In response to the final Office Action of November 3, 2008, the present application has been carefully reviewed and amended. Entry of the present amendment and reconsideration of the application are respectfully requested.

Drawings

The drawings have been amended, and specifically Figure 18 has been added to provide correspondence with the written description and show every feature of the invention specified in the claims. No new matter has been added, as Figure 18 sets forth the previously described relationship of a catheter with a narrowing at the tip of an injectate lumen, such as by a guide wire in a guide wire lumen.

Therefore, the drawings are believed in compliance with 37 CFR §1.83(a).

Claim Rejections under 35 USC §112

Claim 20 stands rejected under 35 USC §112, first paragraph for recitation of "compensating for passage of the indicator through terminal port includes compensating for a volume of the indicator passing through the terminal port corresponding to the relationship $Q = \dfrac{k(T_b - T_i) \cdot V(1-a)}{S}$." [Paper 20081028, pages 3–4]

Dependent Claim 20 and independent Claim 1 from which it depends, has been amended to recite in part "measuring the blood flow rate based on the passage of the indicator through the terminal port...wherein measuring the

blood flow rate corresponds to a relationship $Q = \dfrac{k(T_b - T_i) \cdot V(1-a)}{S}$." As the

recited equation expressly provides for measurement of the flow rate, applicant

respectfully submits Claim 20 complies with 35 USC §112, first paragraph.

Claim 20 further stands rejected under 35 USC §112, second paragraph
as being indefinite. [Paper 20081028, pages 4-5]

The "compensating" terms have been clarified and antecedent basis for
the identified terms has been included. Therefore, Claim 20 complies with 35
USC §112, second paragraph.

Claim Rejections under 35 USC §102

All the pending claims, Claims 14 and 16-20 stand rejected under 35
USC §102, as being anticipated by Pfeiffer, US Patent No. 6,224,585 [Paper
20081028, page 5]

Pfeiffer discloses a catheter having a sensor lumen (4) and a pressure
lumen (2).
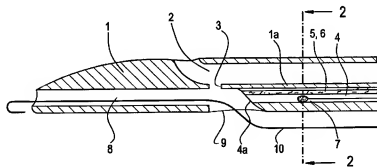
However, Pfeiffer does not measure a blood flow rate. Rather, Pfeiffer measures a pressure or temperature of the blood flow, but not the flow rate. Specifically, Pfeiffer discloses:

> The first lumen is a sensor lumen **4** in which sensor lines, such as fiber optic and/or thermistor connecting lines, are guided. The other lumen is a pressure lumen **2** which is used to collect blood and measure pressure over a liquid column. In addition, in 50 an alternative embodiment, the catheter **1** can also be provided with length marks (not shown) and an x-ray contrast strip (not shown).
>
> (Col. 5)

> The sensors used in the catheter system in accordance 65 with the present embodiment are position within the sensor lumen **4**. These sensors which may include an optically
>
> (Col. 5)

> Furthermore, a thermal sensor element **7** may 20 also be provided in the sensor lumen **4** to provide accurate measurement of temperature.
>
> (Col. 6)

There is no disclosure of measuring a blood flow rate in Pfeiffer.

In contrast, the rejected claims have been amended to recite in part "a method of measuring a blood flow rate ... comprising ... measuring the blood flow rate based on the passage of the indicator through the terminal port."

As Pfeiffer does not disclose or suggest either (i) measuring the blood flow rate; or (ii) measuring the blood flow rate based on the passage of the indicator through the terminal port, the outstanding rejection has been overcome.

As each of the pending claims, Claims 14 and 16–20, include these limitations, these claims are in condition for allowance. If, however, the

Examiner believes that any further issues remain, Examiner Pani is cordially invited to call the undersigned so that any such matters can be promptly resolved.

Respectfully submitted,

Dated: February 3, 2009   /Brian Shaw/
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